

C. Remarks

The claims are 1-7, with claims 1, 3 and 6 being independent. New claim 7 has been added. Support for this new claim may be found, for example, in the specification at page 21, lines 8-14. No new matter has been added. Reconsideration of the present claims is expressly requested.

Claims 1-3, 5 and 6 continue to be rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Fuglevand in view of Morishima. Claim 4 continues to be rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Fuglevand in view of Morishima and U.S. Patent No. 6,523,699 B2 (Akita). The grounds of rejection are respectfully traversed.

In the September 24, 2008 Advisory Action, the Examiner alleged that the arguments presented in Applicants' September 11, 2008 Response at the bottom of page 4 and the top of page 5 were not directed to the intended combination of the cited references. However, Applicants respectfully submit that these comments were directed to the issues discussed during the September 3, 2008 interview. The arguments specifically addressing the Examiner's position were presented on page 3 and 4 of the Response.

Specifically, while the Examiner acknowledged that Fuglevand does not teach coating the electrolyte membrane precursor material before polymerization such that the claimed infiltration takes place, the Examiner pointed to the disclosure in Morishima at paragraph [0049] that teaches that the catalyst layer can be coated with a solution of the same electrolyte as that of the electrolyte membrane prior to hot pressing the catalyst layer and the electrolyte membrane. Applicants respectfully submit that the combination of Fuglevand and Morishima cannot affect the patentability of the claimed invention.

Morishima does not teach combining the electrolyte membrane precursor material and the catalyst prior to polymerization as claimed. Morishima teaches coating the catalyst with an already polymerized electrolyte material solution and then combining the same with an already polymerized solid electrolyte membrane. This leads to a structure, which is different from that as presently claimed.

In both in Fuglevand and in Morishima, it is essential to separately prepare a solid electrolyte membrane. While Morishima discloses that an electrolyte solution may be applied to the catalyst layer before hot pressing the resulting layer with the electrolyte membrane, this process always produces an interface between the electrolyte membrane and the electrolyte components on or in the catalyst layer (if assumed, *arguendo*, that infiltration takes place), which increases the resistance of the cell. To the contrary, in the present invention, the compound having proton conductivity that is applied on the catalyst layer is converted into an electrolyte membrane by polymerization. As a result, there is no interface between the electrolyte membrane and the parts thereof in and on the catalyst layer. Thus, the membrane electrode assembly formed as recited in claims 1 and 6 differs structurally from the alleged combination of Fuglevand and Morishima.

Also, the Examiner has not shown that the combination of Fuglevand and Morishima would result in a method in which polymerization of the electrolyte membrane precursor composition occurs after infiltration into the catalyst layer, as recited in claim 3. The disclosure in Morishima regarding the use of a solution refers to the solution of the same electrolyte material as that of the electrolyte membrane, i.e., the catalyst layer is coated with an already polymerized electrolyte membrane material.

Akita cannot cure the deficiencies of Fuglevand and Morishima. Akita was cited for the teaching related to the platinum catalyst thickness. Even if assumed, *arguendo*, that Akita contains the alleged teaching, this reference, like Fuglevand and Morishima, does not disclose or suggest applying a precursor material on the catalyst layer and then converting it into an electrolyte membrane by polymerization.

Accordingly, Applicants respectfully submit that the cited documents, whether considered separately or in any combination, do not disclose or suggest all of the presently claimed elements.

Wherefore, withdrawal of the outstanding rejections and passage of the application to issue are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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